

ABSTRACT

5 A system and method for treating feedstocks containing solids, sludges
or slurries that contain organics includes introducing the feedstock into a
desorption chamber. In the desorption chamber, the temperature and
10 pressure of the feedstock are elevated to volatilize a portion of the feedstock
and thereby separate the feedstock into a volatile portion containing organics
and a residue portion. Steam, water or oxidants can be injected into the
desorption chamber to aid in the volatilization process. From the desorption
chamber, the volatile portion of the feedstock is transferred to a reactor for
hydrothermal treatment to oxidize or reform the organics in the volatile
15 portion. In the hydrothermal reactor, the volatile portion may be reacted with
excess oxidant and auxiliary fuel at a temperature between approximately
1000°F and approximately 1800°F and a pressure of between approximately
20 atmospheres and approximately 200 atmospheres.

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